

# Homework 5 Grading Rubric

MCS 401 Summer 2015

There were 108 points possible - 33 based on completeness, 70 based on correctness, and 5 based on me being able to navigate what you turned in - but making over 100 points was not allowed.

## 1 Check Marks (33 points possible)

Check marks mean that you attempted a part of a problem, not that you did it correctly. Sorry for any confusion this causes.

I considered attempting each separate part of a given problem as one point. The number of parts each problem had should be clear from context except for maybe problems 5, 7 (8.3-2), and 8 (15.3-2). Problem 5 was zero parts since it was just a reading. Problem 7 (8.3-2) had 2 parts - answering about stability and coming up with a scheme. And problem 8 (15.3-2) had 2 parts - the drawing and the answer about memoization.

## 2 Graded Problems (70 points possible)

I graded six of the problems based on correctness, one was worth 20 points and the other five were worth 10 points each.

### Problem 1 (20 points)

- (0 points) missing
- (5 points) only parts c and d were correct with no steps shown for the algorithms in part a or b (in c, I counted both the weighted and unweighted matrices as correct)
- (10 points) either Kruskal or Prim was correctly shown, but not both
- (15 points) both Kruskal and Prim algorithms were shown correctly but parts c and d were no correct

- (20 points) everything was correct

**Problem 3 (10 points)**

- (0 points) missing
- (3 points) some work but incorrect
- (5 points) important information left off table
- (8 points) table correct, but minor error made
- (10 points) correct representation of algorithm

**Problem 7, 8.2-1 (10 points)**

- (0 points) missing
- (8 points) not enough steps were shown
- (10 points) all steps (or at least most steps with some combined) were shown with correct  $C$  array at the end

**Problem 7, 11.3-4 (10 points)**

- (0 points) missing
- (5 points) value used for  $\frac{\sqrt{5}-1}{2}$  was cut off too early and answers were incorrect, but method was ok otherwise
- (10 points) all answers correct

**Problem 8, 15.2-3 (10 points)**

- (0 points) missing or just wrong
- (8 points) incorrect conditions or no conditions put on the constant at the end of the induction step
- (10 points) correct proof

**Problem 8, 15.2-5 (10 points)**

- (0 points) missing
- (10 points) correct calculation with reason provided

### **3 Presentation Bonus (+5 points possible)**

I gave an extra 5 points to some people as a thank you for turning in something that was easy to grade. These assignments had somewhat ok handwriting or were typed, the problem numbers were not hidden underneath the staple, and, most importantly, the problems were in sequence. So thanks to those of you who did that!